OZONE DEPLETING SUBSTANCES

INFORMATION BRIEFING

Brief to:
AMC DCS G-3

19 DEC 03

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Environmental
Support Office

Environmental Support Office

Army ODS Elimination Program

ODS IN WEAPON SYSTEMS

Halon 1301: Fire and Explosion Protection

-- Armor/Engine: 7 types, 18K vehicles, 194K lbs
-- Armor/Crew: 5 types, 16K vehicles, 180K lbs
-- Aviation/Eng: 4 types, 5K vehicles, 24K lbs
-- Watercraft/Eng: 5 types, 11 vehicles, 11K lbs

Freon 12: Air Conditioning

-- HMMWV Ambulance: 3.6K vehicles, 12.6K lbs

Freon 22: Environmental Control

-- Family of ECUs: 9 types, 22K units, 136K lbs

FOUR THRUSTS:

- ODS REPLACEMENT
- R&D FOR ODS ALTERNATIVES
- ARMY STOCKPILE OF ODS
- ODS ELIMINATION POLICY

ODS REPLACEMENT

- Environmental Control Units (Freon)
- Bradley Engine Compartment (Halon)
- Abrams Engine Compartment (Halon)
- Fox Engine Compartment (Halon)
- Fox Air Conditioning (Freon)
- HMMWV Air Conditioning (Freon)
- Watercraft Refrigeration (Freon)
- Watercraft Engine Room (Halon)
- Hand-held Fire Extinguishers (Halon)
- Flightline Fire Extinguishers (Halon)

Eliminates 60% of Army Halon Use

Eliminates 100% of Army Halon Use

Bradley Engine Compartment

- 6,800 vehicles, 48K lbs halon installed
- HFC-227ea approved NOV 97: swap-out
- RRAD remanufacture bottles NOV 98
- Retrofit started AUG 98, completed SEP
- MLRS (850 vehicles, 6K lbs) included

Abrams Engine Compartment

- 7,800 vehicles, 110K pounds halon installe
- Dry powder (Sodium Bicarbonate): new sys
- Retrofit money ($44M) reprogrammed SEP
- ECP still signed MAR 00: in AIM, SEP effor
- Half of Abrams fleet to be converted by 201
- FAASV and M9 (1,500 vehicles) to follow

Watercraft Engine Room

- 11 vehicles, 11K pounds halon installed
- HFC-227ea with water wash-down
- $11M effort piggy-backing USN efforts
- Started AUG 98, completes SEP 05

R&D FOR ODS ALTERNATIVES

- Armored Crew Compartment
- Aviation Engine Nacelles
- Hand-Held Fire Extinguishers
- Environmental Control Units

Armored Crew Compartment

- Tank-Automotive Research, Development and Engineering Center (TARDEC)
- Six-year, $18M effort completed in FY99
- Two agents met halon 1301 performance
- Stryker will leverage TARDEC work

Aviation Engine Nacelles

- Program Executive Officer, Aviation
- Started 5-yr halon alt R&D effort in FY00
- Expedited by new PEO: 3-yr, $5M effort
- Select one common alternative by MAR 0
- Identify aircraft-specific systems by SEP

Hand-Held Fire Extinguishers

- Halon HHFEs used on ground combat, aviation, communication, and support vel
- Qualified existing CO_2 extinguisher: but not accepted by PM Abrams, PEO AVN
- PM Abrams developed and qualified H_2O + Potassium Acetate alternative to field i
- PEO AVN started 5-yr program in FY03

Environmental Control Units

- Communications-Electronics Research, Development & Eng'g Center (CERDEC)
- Eight-year, $7M "joint" R&D effort
- Replace Freon 22 in 22,000 Army ECUs
- Alternative CO_2 high-pressure (1500 psi)
- Prototype last year, ECU IOC FY08

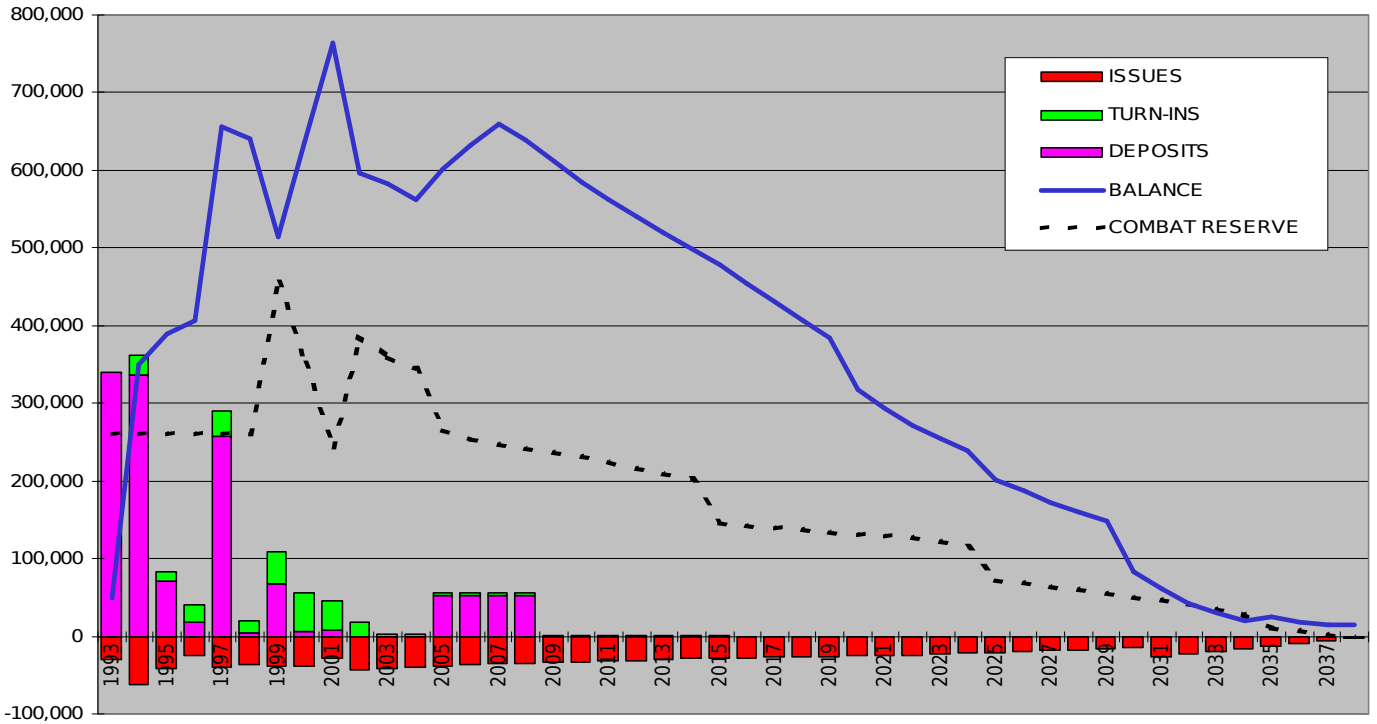
ARMY ODS RESERVE

Halon 1301 Stockpile

- Originally configured to 1990 requirements
  - -- Engine compartments retrofitted by FY05
  - -- Remaining uses retired w/vehicles by FY2
- Retrofits delayed and service lives extended
- ESO lead reduced Army use by over 50%

➡ **Support now possible thru 2030**

ARMY HALON STOCKPILE



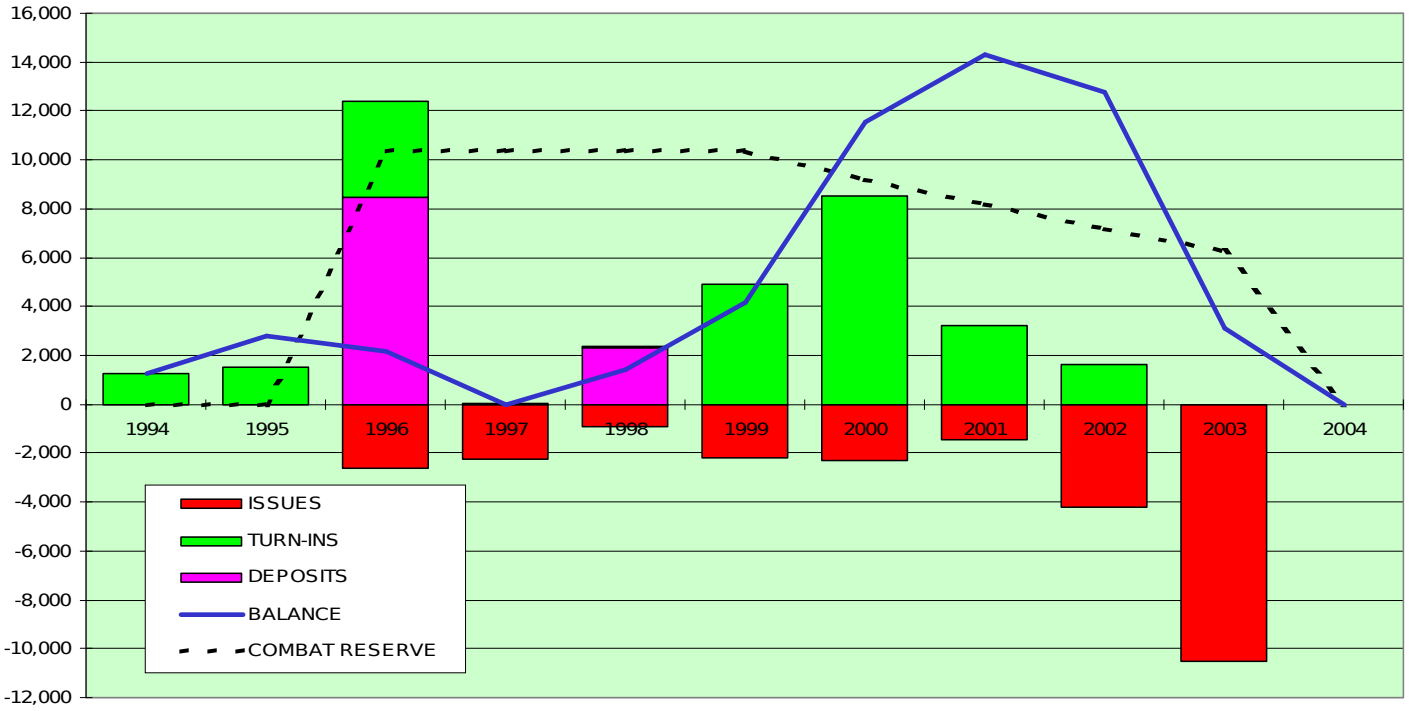
ARMY ODS RESERVE

Freon 12 Stockpile

- HMMWV, Fox & watercraft supported
- Watercraft retrofits completed in FY99
- Fox NBC retrofit completed in FY00
- HMMWV retrofit to complete in FY04

- Retire Army Freon Stockpile in FY05?

ARMY FREON STOCKPILE



ODS Elimination Policy

Army Acquisition Executive Memo 2000

- ODS Alternatives Are Developed and Available
  - -- Authorized alternatives listed: others need waive
  - -- ODS Stockpile only for support of legacy systems
- PMs Must Plan to Retrofit ODS Subsystems
  - -- *"Failure to do so will jeopardize the long-t readiness of their systems."*
- No ODS Allowed in New Systems & Major Mods
- No Army Contract Can Require a Class I ODS

ODS Elimination Policy

DASA(ALT)/PP Memo APR 03

- Army ODS Elimination is a Readiness Issue
- ASA(ALT) remains responsible for:
  - -- Removing ODS from weapons & processes
  - -- Interim ODS support for legacy platforms
- ASA(ALT) continues to participate in forums affecting weapon and industrial operations
- ESO is ODS OPR for ASA(ALT) & HQAMC

Readiness Issue

ODS Elimination Policy

Army Acquisition Executive Memo 2004

- To reference new USD(AT&L) ODS Memo
- To reference DASA(ALT)/PP Memo APR 03
- To draw a “line in the sand” for PMs at 2030
  - -- Legacy systems must include ODS retrofits in any mods that extend service life beyond 2030
- Will emphasize ban on ODS in new systems
- Will emphasize ban on ODS in contracts

ESO

(formerly AAPPSO)

Home Page

www.environmentalsupportoffice.com

ODS Elimination Program

ESO

SA(ALT)'s Environmental Support Office, formerly known as AAPPSO

Mission Statement	Points of Contact	Links
Army Acquisition Pollution Prevention Program (A2P3)	Army Ozone-Depleting Substance (ODS) Elimination Program	Joint Group on Pollution Prevention (JG-PP)

ASA(ALT) Digital Library, search for ESOH
Program Management Community of Practice (PM CoP), ESOH Special Interest Section
Acquisition Knowledge Sharing System (AKSS), formerly the Defense Acquisition Deskbook
Memorandum of Agreement between the AMC, G-3 and the Deputy Assistant Secretary of the Army for Policy and Procurement (SAAL-ZP), an Office of the Assistant Secretary of the Army (Acquisition, Logistics and Technology), establishing the dual-hatted responsibilities of the environmental Support Office (ESO or AAPPSO)